

WHAT IS CLAIMED IS:

1. A vehicle navigation system provided with guidance target
storing means for storing information about guidance target
5 points, which is extracted from information about a preset route
extending from a current position of a vehicle to a destination
and which is based on map information, and guidance means for
providing guidance on said route by voice or with display, said
system comprising:

10 road-between-guidance-target-points configuration
determining means for determining a configuration of a road
between two successive guidance target points whose information
is extracted from the information stored in said guidance target
storing means;

15 continuous guidance threshold distance setting means for
setting a threshold distance for continuous guidance based on
the road configuration determined by said
road-between-guidance-target-points configuration
determining means;

20 distance-between-guidance-target-points calculation
means for calculating a distance between the two successive
guidance target points whose information is extracted from the
information stored in said guidance target storing means; and

route guidance means for providing continuous guidance
25 through said guidance means when the calculated distance
between the two successive guidance target points is shorter
than the threshold distance for continuous guidance set by said
continuous guidance threshold distance setting means.

30 2. The vehicle navigation system according to Claim 1, wherein

said road-between-guidance-target-points configuration determining means determines the configuration of the road between the two successive guidance target points according to either one of following conditions: a number of lanes of the road, a width of the road, a heading difference between directions in which the vehicle will be headed at the two successive guidance target points, respectively, and a turn angle showing what degree the vehicle will make a turn at a first one of the two successive guidance target points, and said continuous guidance threshold distance setting means sets the threshold distance for continuous guidance based on a table showing a relationship between either one of the number of lanes, the road width, the heading difference and the turn angle and the threshold distance for continuous guidance.

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3. The vehicle navigation system according to Claim 1, wherein said road-between-guidance-target-points configuration determining means determines the configuration of the road between the two successive guidance target points according to either one of following conditions: a number of lanes of the road, a width of the road, a heading difference between directions in which the vehicle will be headed at the two successive guidance target points, respectively, and a turn angle showing what degree the vehicle will make a turn at a first one of the two successive guidance target points, and, when said road-between-guidance-target-points configuration determining means determines that either one of the number of lanes of the road, the road width and the heading difference is equal to or greater than a predetermined value or the turn angle is equal to or less than a predetermined value, said

continuous guidance threshold distance setting means sets the threshold distance for continuous guidance to be longer than a reference distance, and said continuous guidance threshold distance setting means sets the threshold distance for continuous guidance to be shorter than a reference distance otherwise.

4. The vehicle navigation system according to Claim 1, wherein said road-between-guidance-target-points configuration determining means determines the configuration of the road between the two successive guidance target points according to either one of following conditions: a number of lanes of the road, a width of the road, a heading difference between directions in which the vehicle will be headed at the two successive guidance target points, respectively, and a turn angle showing what degree the vehicle will make a turn at a first one of the two successive guidance target points, and said continuous guidance threshold distance setting means sets the threshold distance for continuous guidance according to a relational expression showing a relationship between either one of the number of lanes of the road, the road width, the heading difference and the turn angle and the threshold distance for continuous guidance.

5. A vehicle navigation system provided with guidance target point storing means for storing information about guidance target points, which is extracted from information about a preset route extending from a current position of a vehicle to a destination and which is based on map information, and guidance means for providing guidance on said route by voice

or with display, said system comprising:

travel-time-between-guidance-target-points

determining means for determining either one of a travel time
required for the vehicle to travel on a road between two
5 successive guidance target points whose information is
extracted from the information stored in said guidance target
point storing means and a speed limit on the road;

continuous guidance threshold distance setting means for
setting a threshold distance for continuous guidance based on
10 the travel time or the speed limit determined by said
travel-time-between-guidance-target-points determining
means;

distance-between-guidance-target-points calculating
means for calculating a distance between the two successive
15 guidance target points whose information is extracted from the
information stored in said guidance target point storing means;
and

route guidance means for providing continuous guidance
through said guidance means when the calculated distance
20 between the two successive guidance target points is shorter
than the threshold distance for continuous guidance set by said
continuous guidance threshold distance setting means.

6. The vehicle navigation system according to Claim 5, wherein
25 said travel-time-between-guidance-target-points determining
means determines either one of the travel time required for the
vehicle to travel on the road between the two successive
guidance target points and the speed limit on the road based
on a travel time or a speed limit prestored in each link
30 information included in the map information, and said

continuous guidance threshold distance setting means sets the threshold distance for continuous guidance based on a table showing a relationship between the travel time or the speed limit and the threshold distance for continuous guidance.

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7. The vehicle navigation system according to Claim 5, wherein said travel-time-between-guidance-target-points determining means determines either one of the travel time required for the vehicle to travel on the road between the two successive guidance target points and the speed limit on the road based on a travel time or speed limit prestored in each link information included in the map information, and when said travel-time-between-guidance-target-points determining means determines that the determined travel time is equal to or less than a predetermined value or the determined speed limit is equal to or greater than a predetermined value, said continuous guidance threshold distance setting means sets the threshold distance for continuous guidance to longer than a reference distance, and sets the threshold distance for continuous guidance to shorter than the reference distance otherwise.

8. The vehicle navigation system according to Claim 5, wherein said travel-time-between-guidance-target-points determining means determines either one of the travel time required for the vehicle to travel on the road between the two successive guidance target points and the speed limit on the road based on a travel time or speed limit prestored in each link information included in the map information, and said continuous guidance threshold distance setting means sets the threshold distance for continuous guidance according to a

relational expression showing a relationship between the determined travel time or the determined speed limit and the threshold distance for continuous guidance.

5 9. A route guidance method comprising the steps of:

storing information about guidance target points placed on a route extending from a current position of a vehicle to a destination;

10 determining a configuration of a road between two successive guidance target points, whose information is extracted from said stored information;

setting a threshold distance for continuous guidance based on the determined road configuration;

15 calculating a distance between the two successive guidance target points; and

providing continuous guidance when the calculated distance between the two successive guidance target points is shorter than said set threshold distance for continuous guidance.

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10. A route guidance method comprising the steps of:

storing information about guidance target points placed on a route extending from a current position of a vehicle to a destination;

25 determining a travel time required for the vehicle to travel on a road between two successive guidance target points whose information is extracted from said stored information;

setting a threshold distance for continuous guidance based on the determined travel time;

30 calculating a distance between the two successive

guidance target points; and

providing continuous guidance when the calculated distance between the two successive guidance target points is shorter than said set threshold distance for continuous
5 guidance.